

Amendments to the Claims

This listing of claims replaces all prior versions and listings of claims in the application.

Listing of Claims

1. (Withdrawn) A photodetector comprising:

a plurality of detector elements arranged over a substrate having light-transparent property and connected in parallel,

wherein the photodetector detects light from a multiplicity of directions.

2. (Withdrawn) The photodetector according to claim 1,

wherein the plurality of detector elements comprise a first detector element and a second detector element;

wherein the first detector element is formed by a first electrode, a first semiconductor film, and a second electrode; and

wherein the second detector element is formed by the first electrode, a second semiconductor film, and a third electrode.

3. (Withdrawn) The photodetector according to claim 2,

wherein each of the first electrode and the third electrode is formed by a conductive film having light-transparent property; and

wherein the second conductive film is formed by a metal film.

4. (Withdrawn) The photodetector according to claim 1,

wherein the plurality of detector elements comprise a first detector element, a second detector element and a third detector element;

wherein the first detector element is formed by a first electrode, a first semiconductor film, and a second electrode;

wherein the second detector element is formed by the first electrode, a second semiconductor film, and a third electrode; and

wherein the third detector element is formed by the first electrode, the first semiconductor film, and a fourth electrode.

5. (Withdrawn) The photodetector according to claim 4,

wherein each of the first electrode and the third electrode is formed by a conductive film having light-transparent property; and

wherein each of the second electrode and the fourth electrode is formed by a metal film.

6. (Withdrawn) The photodetector according to claim 3 or 5,

wherein the conductive film having light-transparent property is formed by an indium oxide-tin oxide alloy, an indium oxide-zinc oxide alloy, or zinc oxide; and

wherein the metal film is formed by a film containing an element of gold, copper, nickel, platinum, or silver.

7. (Withdrawn) The photodetector according to claim 2 or 4, wherein each of the first semiconductor film and the second semiconductor film is formed by an amorphous silicon film, a silicon film having PIN junction, or a fine crystalline silicon film.

8. (Currently Amended) A portable information tool comprising:

a first housing and a second housing coupled together through a hinge portion,

wherein the first housing includes a first display being visible from a first side of the first housing and a second display being visible from a second side of the first housing opposite to the first side,

wherein the second housing includes an operation portion,

wherein the first display and the operation portion are foldable so as to face each other,

wherein the portable information tool comprises a photodetector including a plurality of detector elements including at least a first detector element and a second detector element connected in parallel,

wherein the photodetector comprises:

a transparent substrate;
a first transparent electrode over the transparent substrate;
a first semiconductor film over the first transparent electrode;
a metal electrode over the first semiconductor film;
a second semiconductor film over the metal electrode; and
a second transparent electrode over the second semiconductor film,

wherein the first detector element detects light from the first side, and
wherein the second detector element detects light from the second side.

9. (Previously Presented) The portable information tool according to claim 8, wherein the photodetector is provided in the first housing.

10. (Previously Presented) The portable information tool according to claim 8, wherein the photodetector is provided in the second housing.

11. (Previously Presented) The portable information tool according to claim 8, wherein the photodetector is provided under operation buttons having light-transparent property of the operation portion.

12. (Previously Presented) The portable information tool according to claim 8,
wherein the first detector element detects an intensity of illumination on the first side in a state where the first housing and the second housing are opened; and
wherein the second detector element detects an intensity of illumination on the second side in a state where the first housing and the second housing are folded.

13. (Previously Presented) The portable information tool according to claim 8, wherein the first detector element detects an intensity of illumination on the first side in a state where the first housing and the second housing are opened; and wherein the first detector element detects the brilliance in the first display and the second detector element detects an intensity of illumination on the second side in a state where the first housing and the second housing are folded.

14. (Previously Presented) The portable information tool according to claim 8, wherein the plurality of detector elements include a third detector element;

wherein the first detector element detects an intensity of illumination on the first side in a state where the first housing and the second housing are opened; and

wherein the second detector element detects an intensity of illumination on the second side and the third detector element detects a brilliance of the first display in a state where the first housing and the second housing are folded.

15. (Previously Presented) The portable information tool according to claim 8, wherein each of the first display and the second display is formed by a liquid crystal display device or an EL display device.

16. (Previously Presented) The portable information tool according to claim 8, wherein the first display and the second display are formed by a display device capable of emitting light from both surfaces.

17. (Previously Presented) A portable information tool comprising:

a first housing including a first display portion and a second display portion on different surfaces and a second housing including an operation portion coupled together through a hinge portion ,

a first means for detecting an intensity of illumination on a side of the first display portion in a state where the first housing and the second housing are opened;

a second means for displaying by controlling a brilliance of the first display portion depending upon a result detected by the first means;

a third means for detecting an intensity of illumination on a side of the second display portion in a state where the first housing and the second housing are folded; and

a fourth means for displaying by adjusting a brilliance of the second display portion depending upon a result detected by the third means,

wherein the first means and the third means are connected in parallel.

18. (Previously Presented) The portable information tool according to claim 17, wherein the first means and the third means are provided in the first housing.

19. (Previously Presented) The portable information tool according to claim 17, wherein the first means and the third means are provided in the second housing.

20. (Previously Presented) The portable information tool according to claim 17, wherein the first means and the third means are provided under operation buttons having light-transparent property of the operation portion.

21. (Previously Presented) The portable information tool according to claim 17, further comprising:

a fifth means for making the first display portion display and detecting a brilliance thereof in a state where the first housing and the second housing are folded; and

a sixth means for displaying by controlling the brilliance of the first display portion depending upon a result detected by the fifth means and the result detected by the first means.

22. (Previously Presented) The portable information tool according to claim 17, wherein each of the first display portion and the second display portion is formed by a liquid crystal display device or an EL display device.

23. (Previously Presented) The portable information tool according to claim 17, wherein the first display portion and the second display portion are formed by a display device capable of emitting light from both surfaces.

24. (Previously Presented) A method for displaying a foldable portable information tool having a photodetector comprising:

obtaining a first result of detection by detecting an intensity of illumination on a side of a first display portion using a first detector element in a state where a first housing and a second housing are opened;

displaying by controlling a brilliance of the first display portion depending upon the first result of detection;

obtaining a second result of detection by detecting an intensity of illumination on a side of a second display portion using a second detector element in a state where the first housing and the second housing are folded; and

displaying by adjusting a brilliance of the second display portion depending upon the second result of detection,

wherein the first detector element and the second detector element are connected in parallel.

25. (Previously Presented) The method for displaying the portable information tool according to claim 24,

displaying the first display portion in a state where the first housing and the second housing are folded;

obtaining a third result of detection by detecting a brilliance thereof using the first detector element; and

displaying by controlling the brilliance of the first display portion depending upon the third result of detection and the first result of detection.

26. (Previously Presented) A method for displaying a foldable portable information tool having a photodetector comprising:

obtaining a first result of detection by detecting a brilliance of a first display portion using a first detector element in a state where a first housing and a second housing are folded;

obtaining a second result of detection by detecting an intensity of illumination on a side of the first display portion using a second detector element in a state where the first housing and the second housing are opened;

displaying by controlling the brilliance of the first display portion depending upon the first result of detection and the second result of detection;

obtaining a third result of detection by detecting an intensity of illumination on a side of the second display portion using a third detector element in a state where the first housing and the second housing are folded; and

displaying by adjusting a brilliance of the second display portion depending upon the third result of detection,

wherein the second detector element and the third detector element are connected in parallel.

27. (Withdrawn) The photodetector according to claim 5,

wherein the conductive film having light-transparent property is formed by an indium oxide-tin oxide alloy, an indium oxide-zinc oxide alloy, or zinc oxide; and

wherein the metal film is formed by a film containing an element of gold, copper, nickel, platinum, or silver.

28. (Withdrawn) The photodetector according to claim 4, wherein each of the first semiconductor film and the second semiconductor film is formed by an amorphous silicon film, a silicon film having PIN junction, or a fine crystalline silicon film.